

this information, the notion of a vaccine is obvious. Recognins are tumor associated antigens; yes. Recognins are oncoproteins, yes. But this is not enough to make a vaccine. The Recognin vaccine was not at all 'obvious' until the results in 6) above were obtained. As Bystryn (Cancer and Metastasis Reviews 9:81-91, 1990, page 83), the other reference which the Examiner cites puts it, when paraphrasing some of the points in 6) above "Antigens that satisfy these requirements have not yet been identified". With the Recognins, the applicant respectfully submits that they have been identified since each of the criteria listed are for the first time satisfied.

The applicant therefore submits that the criteria for the definition of vaccines proposed by Bystryn and Stevenson are correct, that neither Cantrell nor Rapp meet these criteria, but that the Recognins do. Bystryn and Stevenson make it clear what the criteria should be. Therefore applicant's Claims 1 and 2 should be allowed.

Under Examiner's "Response to Applicant's Arguments, pages 6 -9:

Both Stevenson and Bystryn correctly review a variety of approaches possible to creating cancer vaccines, and clearly indicate that the field is in its infancy. To take two issued patents, even if they were adequate, as closing the possibilities for novel approaches to the design and discovery of cancer vaccines would not appear to be indicated. There may eventually be hundreds of unique cancer vaccines. The Examiner acknowledges that neither Cantrell nor Rapp refer to, or in any way deal with the Recognins.

In conclusion, both of the Examiner's own references, Bystryn and Stevenson, which the Examiner cites to represent those of ordinary skill, make it clear what the criteria should be for cancer vaccines. From their criteria, just being a tumor associated antigen or an oncogene is not sufficient, and one of ordinary skill would

"necessarily need to have known that anti-malignin antibody is a cytotoxic antibody which increases in concentration as the risk of cancer increases in order to be motivated to use Recognins as a vaccine" (from Examiner's page 9) in addition to the other facts listed in 1) through 6) above. Therefore applicant respectfully suggests that Claims 1 and 2 are now in condition to be allowed.

Respectfully submitted,

A handwritten signature in cursive script that reads "Samuel Bogoch". The signature is written in dark ink and is positioned above the printed name.

Samuel Bogoch, M.D., Ph.D.